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Computing Curriculum Overview

Year	Autumn 1	Autumn 2	Spring 1	Spring 1	Summer 1	Summer 2
7	Introduction to Computing	Using Media Career Link	Scratch Programming	App Developer Career Link	Digital Literacy PSHCE Link	KPR Scenario
	A digital literacy-based unit to introduce students to the computer labs and ensure all students have a basic understanding of how to operate a computer. Also including safety, the history of computers and computer devices.	The first iMedia based topic which teaches students the basics of word processing software, while teaching them how to resource and research the internet for a particular cause. Providing a base of theory for students who pick KS4 iMedia.	The first Computer Science based topic used to introduce programming to students in a simple block-based form so to teach the cornerstones of computational thinking in a manor enjoyable for all.	A practical topic which builds upon the knowledge and skills taught in Scratch. Students extend their understanding of BYOB techniques and create an app from the programming side and simulate it on a GUI online	A theory-based topic which teaches students about the new online world we live in, explaining the dangers and how students can protect themselves online.	This is a creative project for the students to undertake in which they use a range of different software to help to promote a local vet. This provides students the required digital literacy skills required if they don't pick the KS4 computing options.

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Year 8	Autumn	Spring	Summer
	Spreadsheets **Careers Link**	**Python Turtle**	**Using Media/Photoshop**
	Although no longer required for either of the KS4 options, the ability to analyse and edit numerical data is still a key skill students are required to pick up to have full digital literacy.	Building on from Scratch in Year 7, students will now be performing text-based coding, however the output of the code is imagery so students are assisted on a visual level.	Building on from using media in Year 7, students will now be editing and creating images in specialist software which is a key component of the required iMedia coursework.

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Year	Autumn 1	Autumn 2	Spring 1	Spring 1	Summer 1	Summer 2
9	The Digital World PSHCE Link	Binary	Web Design/HTML Careers Link	Python Basics Careers Link	Databases	Flow Charts, Algorithms and Pseudocode
	The final of the digital literacy topics used to ensure students understand how to be safe online and the laws which affect them.	A Computer Science based topic which is important to the computing curriculum. This teaches students the basic maths of computers and how computers represent data stored.	This topic of KS3 intertwines all the three areas of computing where students get to develop websites, testing their ability to code, design and knowledge of the internet.	The final step of the programming journey in KS3 students will be coding using the basic programming constructs in a fully text-based language ensuring full preparation for practical elements of the KS4 Computer Science qualification.	The ability to analyse and edit text-based data is still a key skill that students are required to pick up to have full digital literacy. Students create a data base using suitable data types, add validation and run suitable queries and reports	A Computer Science based topic, teaching students how to plan the creation of programs both in a visual and text-based format. Students will also learn some basic searching algorithms used by computers.

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Year	Autumn 1	Autumn 2	Spring 1	Spring 1	Summer 1	Summer 2
10	Java Practical Programming Careers Link 1.1 System Architecture	1.2 Memory and Storage 1.5 Systems Software	1.3 Computer Networks Career Link 1.4 Network Security Careers Link	l.4 Network Security (continued) Careers Link 1.6 Ethics	Paper 1 Revision	Paper 1 Mock Practical Programming Project Careers Link
	Java Practical Programming: Learning programming constructs such as sequence, selection and iteration in a practical manner. System Architecture: Learning how the CPU works and the factors affecting its performance.	Memory and Storage: Learning how all data is represented in binary and the difference between RAM and ROM. System Software: Understanding the software which makes up an Operating System and the additional utility software.	Computer Networks: Learning the different ways networks connect including their size, hardware and topology. Network Security: Learning the risks to a network and their prevention methods.	Ethics: Learning the legislation which affects computing and the effects computers had on society.	Recap of all Paper 1 topic, spending a week on each in preparation for first mock.	Preparation for Paper 1 mock and completion of Final few weeks are spent doing multiple mini projects to get more comfortable in a programming environment.

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Year 11	Autumn 1	Autumn 2	Spring 1	Spring 1	Summer 1	Summer 2
	2.1 Algorithms	2.2 Programming Fundamentals Careers Link	2.3 Robust Programs Careers Link 2.4 Boolean Logic 2.5 IDE's	Paper 1 Recap Paper 2 Recap	Mock Papers	
	Algorithms: Learning how to plan programs using pseudocode and flowcharts. Learning different searching/sorting algorithms used in computing	Programming Fundamentals: Learning the theory side of programming include more intricate features such as arrays, functions and use of text files with elements of the Python programming-built in.	Robust Programs: Learning to how test programs creating. Boolean Logic: Learning of Boolean operators which are fundamental to a computer's operation. IDE's: Learning the environment in which programming takes place.	Revision of all theory required in preparation of summer exams.	Practice of past exam papers in preparation of summer exams	